

What is claimed is:

1. A method of automatically packaging a plurality of encased products, each comprising a product sealed in a case barrel and a cap mounted on the case barrel, in a packaging sheet, comprising the steps of:

forcibly arraying said encased products to orient said caps in one direction;

selectively sorting the arrayed encased products to a first feed path for arraying the encased products to package the encased products in a first attitude and a second feed path for arraying the encased products to package the encased products in a second attitude different from said first attitude; and

packaging a given number of said encased products arrayed in said first attitude by said first feed path or said encased products arrayed in said second attitude by said second feed path, with said packaging sheet.

2. A method according to claim 1, wherein said first attitude is an attitude to array said encased products abreast, and a first group of said encased products are arrayed on said first feed path with the caps oriented upwardly and a second group of said encased products are arrayed on said first feed path with the caps oriented downwardly, and the first and second groups of said encased products are alternately discharged from said first feed

path.

3. A method according to claim 2, further comprising the steps of:

5 arraying and feeding the encased products discharged in said first attitude; and

 holding said encased products together by a presser, and packaging the encased products with said packaging sheet.

10 4. A method according to claim 1, wherein said second attitude is an attitude to array said encased products 5 tandem, and said encased products are knocked down to orient said caps in one direction on said second feed path and then successively discharged from said second feed path.

15 5. A method according to claim 1, further comprising the steps of:

 supplying a sheet-like outer pack to the encased products packaged by said packaging sheet, forming
20 perforations in the outer pack, packing the encased products with the outer pack, and applying a first seal to front and rear ends of said outer pack in front of and behind said encased products; and

 tightening said outer pack with said first seal applied
25 thereto, removing air from the outer pack through said perforations and an unsealed region in said first seal, and thereafter applying a second seal to said outer pack.

6. A method according to claim 5, wherein said first seal is formed as a first seal region on a portion of said outer pack near said encased products, and said second seal is formed as a second seal region wider than and overlapping said first seal region of said outer pack.

7. An apparatus for automatically packaging a plurality of encased products, each comprising a product sealed in a case barrel and a cap mounted on the case barrel, in a packaging sheet, comprising:

an arraying and supplying station for forcibly arraying and supplying said encased products to orient said caps in one direction;

a sorting station for selectively sorting the arrayed encased products to a first feed path for feeding the encased products to package the encased products in a first attitude and a second feed path for feeding the encased products to package the encased products in a second attitude different from said first attitude; and

a packaging station for packaging a given number of said encased products arrayed in said first attitude by said first feed path or said encased products arrayed in said second attitude by said second feed path, with said packaging sheet.

8. An apparatus according to claim 7, wherein said arraying and supplying station comprises:

a feeder for successively feeding said encased products; and

a pair of rollers for supporting said caps of said encased products fed from said feeder and feeding said encased products with said caps oriented upwardly.

9. An apparatus according to claim 8, wherein said rollers are rotatably supported on a frame, and have respective outer circumferential surfaces spaced from each other by a minimum distance which is greater than the diameter of the case barrels of said encased products and smaller than the diameter of said caps.

10. An apparatus according to claim 7, wherein said first attitude is an attitude to array said encased products abreast, said first feed path comprising:

a first delivery unit for feeding a first group of said encased products with said caps oriented upwardly; and

a second delivery unit for inverting a second group of said encased products to orient said caps downwardly and feeding said encased products to discharge the encased products alternately with the first group of encased products.

11. An apparatus according to claim 10, wherein said first and second delivery units comprise respective first and second screws rotatable about their own axes, said

second delivery unit having guides for reversing said encased products in coaction with said second screw.

5 12. An apparatus according to claim 7, wherein said packaging station has a movable presser for holding said given number of encased products together when the encased products discharged in said first attitude are packaged by said packaging sheet.

10 13. An apparatus according to claim 7, wherein said second attitude is an attitude to array said encased products tandem, said second feed path comprising:

 a knock-down member for knocking down said encased products to orient said caps in one direction.

15 14. An apparatus according to claim 7, wherein said packaging station comprises:

 first sealing means for supplying a sheet-like outer pack to the encased products packaged by said packaging sheet, and applying a first seal to front and rear ends of said outer pack in front of and behind said encased products; and

 perforating means for forming perforations in said outer pack; and

25 second sealing means for tightening said outer pack with said first seal applied thereto, removing air from the outer pack through said perforations and an unsealed region

in said first seal, and thereafter applying a second seal to said outer pack.

15. An apparatus according to claim 14, wherein said
5 second sealing means comprises:

a first heater block for initially pressing a first seal region of said outer pack near said encased products; and

10 a second heater block for pressing an second seal region of said outer pack which is positioned outwardly of said first seal region after said first heater block presses said first seal region.